

**COMMONWEALTH OF PUERTO RICO
DEPARTMENT OF HEALTH
PUBLIC WATER SUPPLY SUPERVISION PROGRAM**



Stage 2 Disinfectants and Disinfection Byproducts Rule (DBPR) § 142.16 Special Primacy Requirement

The following table contains the PRDOH Action/Compliance with the special primacy requirement of 40 CFR 142.16 for the implementation of the Stage 2 Disinfectants and Disinfection Byproducts Rule (DBPR). This requirement is addressed in the same order that it occur in the rule.

Summary of Federal Requirement	Federal Citation	Explanation of State Policies and Procedures
Requirements for States to adopt 40 CFR part 141, subparts U and V. In addition to the general primacy requirements elsewhere in this part, including the requirements that the State regulations be at least as stringent as federal requirements, an application for approval of a State program revision that adopts 40 CFR part 141, subparts U and V, must contain a description of how the State will implement a procedure for addressing modification of wholesale system and consecutive system monitoring on a case-by-case basis for part 141 subpart V outside the provisions of §141.29 of this chapter, if the State elects to use such an authority. The procedure must ensure that all systems have at least one compliance monitoring location.	§142.16 (m)	PRDOH will not use an authority to address the consecutive system monitoring outside the provisions of §141.29.



Estado Libre Asociado de Puerto Rico
Departamento de Salud

Public Water Supply Supervision Program
Puerto Rico Department of Health
Nacional Plaza Building
431 Ponce De León Ave.
Suite #903
Hato Rey, PR 00917
Tel. (787) 777-0150 / 0151 / 0152

Facsimile transmittal

To: Michael Lowy

Fax: 1-212-637-3887

Location: USEPA Region 2

From: Zuleima Rodríguez

Re: LTZ Primacy

Pages: 12 including cover

☒ Urgent

☐ For Review

☐ Please Comment

☐ Please Reply

☐ Please Recycle

As per your request, enclosed is the letter regarding PRDOH's authority to LTZ.

Zuleima

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Commonwealth of Puerto Rico
Department of Health
Public Water Supply Supervision Program



May 8, 2008

Bruce Kiselica
US EPA Region 2
290 Broadway, 24th Floor
New York, New York 10007-1866

Re: Source Water/Sanitary Survey LT2 Special Primacy Condition

Dear mister Kiselica:

The Environmental Protection Agency (EPA) promulgated the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) in January 4, 2006. The LT2ESWTR has the special primacy condition 142.16 (n)(2), which requires the state to assess significant changes in the watershed and source water as part of the sanitary survey process and determine appropriate follow-up actions for systems.

The Puerto Rico Department of Health (PRDOH) issued in August 5, 2002 Administrative Order AO 2002-364-02, to establish requirements for action plans in response to sanitary surveys. This order provides PRDOH with the authority to require corrective measures and determine appropriate follow-up actions (i.e., be able to enforce) for systems after a sanitary survey has been performed.

The Watershed and Source Water Assessment Process Annex that will be incorporated as part of the sanitary survey form specifically addresses that PRDOH will be able to assess significant changes identified in the watershed and source water as part of the sanitary survey process.

To this extent, PRDOH understands that the existing AO to be sufficient to also apply to the LT2ESWTR, thus satisfying the special primacy condition.

Should you have any questions, please do not hesitate to contact Eng. Zuleima Rodríguez from my staff or me at (787) 777-0150.

Cordially,


Javier O. Torres, PE
Interim Director

ZRH/Sanitary Survey Authority

PO BOX 70184 SAN JUAN, PUERTO RICO 00936-8184

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT
5300 S. DICKINSON AVE.
CHICAGO, ILL. 60637

1969

TO THE PHYSICS DEPARTMENT, UNIVERSITY OF CHICAGO

FROM THE PHYSICS DEPARTMENT, UNIVERSITY OF CHICAGO

RE: [illegible]

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Commonwealth of Puerto Rico
Department of Health
Public Water Supply Supervision Program



U.S. EPA, REGION 2
2008 MAY 19 PM 3:50

May 8, 2008

Bruce Kiselica
US EPA Region 2
290 Broadway, 24th Floor
New York, New York 10007-1866

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Cordially,


Javier O. Torres, PE
Interim Director

ZRH/
Sanitary Survey Authority

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December 14, 2007



FEDERAL EXPRESS

Estado Libre Asociado de Puerto Rico
Departamento de Salud
Office of the Secretary

ACTION

Mr. Alan Steinberg
Regional Administrator
US EPA Region 2
290 Broadway
New York, New York 10007-1866

Steinberg
Callahan
Servidio
cc: Muga (Action)
(with enclosure)
Lafont
Soderberg

Re: PRDOH LT2ESWTR and Stage 2 DBPR Primacy Revision Application Packages

Dear mister Steinberg:

Enclosed is the Puerto Rico Department of Health's (PRDOH) bundled Primacy Revision Application Package for the approval of program revisions to adopt new or revised EPA regulations pursuant Section 1413 of the Safe Drinking Water Act Amendments and 40 CER Part 142 Subpart B.

This package covers the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) and the Stage 2 Disinfectants and Disinfection Byproducts Rule (DBPR). The PRDOH needs full implementation and enforcement authority to proceed with the actions and provisions established in both rules.

To this effect, PRDOH requests approval of the complete and final program revision. The Attorney General Statement submitted certifies that the laws and regulations adopted were duly implemented and are enforceable.

If you have any questions, please do not hesitate to contact Eng. Javier O. Torres, Public Water Supply Supervision Program Interim Director at (787) 777-0150 or by email at javiertorres@salud.gov.pr.

Sincerely,

Rosa Pérez-Perdomo, MD, MPH, PhD

Enclosure: LT2 and Stage 2 Primacy Application Packages

Cc: Bruce Kiselica, Michael Lowy, EPA-NY
Carl Soderberg, EPA-CEPD
Alfredo Casta, Javier O. Torres, PRDOH

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EPA REGION 2
CORRESPONDENCE
CONTROL OFFICE

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NOTICE

*Commonwealth of Puerto Rico
Department of Health
Public Water Supply Supervision Program*



**Long Term 2
Enhanced Surface Water Treatment Rule
Primacy Revision Application Package**

LT2ESWTR

December 2007

Table of Contents

LT2ESWTR

- Section I: State Primacy Revision Checklist
- Section II: Text of the State's Regulation
- Section III: Primacy Revision Crosswalk
- Section IV: State Reporting and Record Keeping Checklist
- Section V: Special Primacy Requirements
- Section VI: Attorney General's Statement of Enforceability
- Section VII: Appendices

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SECTION
I

State Privacy Revision Checklist

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State Primacy Revision Checklist

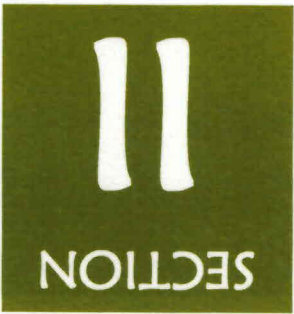
LT2ESWTR

Program Elements		Revision to State Program	EPA Findings / Comments
§ 141.2	Definitions	Adopted by Reference	
§ 142.10 (b)(6)(iii)	Right of entry	^	
§ 142.10 (b)(6)(iv)	Authority to require records	^	
§ 142.10 (b)(6)(v)	Authority to require public notification	^	
§ 142.10 (b)(6)(vi)	Authority to assess civil and criminal penalties	^	
§ 142.10 (b)(6)(vii)	Authority to require CCRs	^	
§ 142.10 (c)	Maintenance of records	^	
§142.10 (d)	Variance/Exemption conditions (if applicable)*	^	
§142.10 (e)	Emergency plans	^	
§142.10 (f)	Administrative Penalty Authority**	^	
* Regulation published in August 14, 1998 <i>Federal Register</i> .			
** Requirement from the 1996 Amendments. Regulations published in the April 28, 1998 <i>Federal Register</i> .			
^ Appropriate documentation of these provisions are in AGO of August 21, 2000, included in this package.			

used for previous
MOBP-1 as well

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12-1-1914



Text of the State's Regulation

CRESPO & RODRIGUEZ, INC.

A-6 Yale Street, Santa Ana
Piedras, Puerto Rico 00927

TAQUIGRAFOS DE RECORD

Tel. (787) 758-5930 / 763-8018
Fax (787) 767-8217

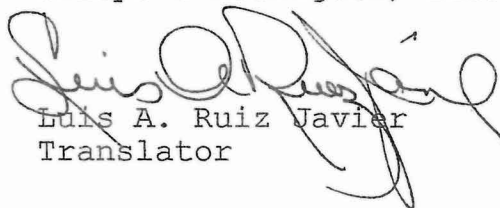


CERTIFICATE OF TRANSLATOR

I certify that the foregoing is a true and exact translation of the Spanish version of Article Number II - Drinking Water of the Drinking Water Section of the General Bylaws of Environmental Health, provided to Crespo & Rodríguez, Inc.

Witness my hand this 12th day of June, 2002, in San Juan, Puerto Rico.

Crespo & Rodríguez, Inc.


Luis A. Ruiz Javier
Translator

ARTICLE II: DRINKING WATER

Section 1.00 PUBLIC SYSTEMS OF DRINKING WATER

1.01 Requisites on Primary Standards.

1. All existing water systems and all those which will be established after the date of approval of these Regulations should comply with the requisites on primary contaminants.
2. The drinking water primary standards in Puerto Rico should be regulated in accordance with Title 40, Part 141 of the Federal Code Regulations, as amended.

1.02 Implementation of the Regulations on Primary Standards.

1. The implementations of the standards on drinking water primary contaminants in Puerto Rico will be subject to Title 40, Part 142 of the CFR, as amended.

1.03 Requisites on Secondary Standards.

1. The drinking water secondary contaminants will be regulated in accordance with Title 40, Part 143 of the CFR, as amended.

1.04 Revolving Fund.

1. Prior to commencement of operation, the Secretary is authorized to require that the drinking water systems, existing systems or new systems commencing to operate on or after October 1, 1999, be these comunal or noncomunal nontransient, to comply with Sections 1419 and 1420 of the Federal Safe Water Act, as amended; as well as with the provisions of Title 40 of the Federal Code Regulations applicable to the primacy of the Drinking Water Program of the Department; and with federal regulations of the Revolving Fund Program and its Sub-programs. The Secretary is also authorized to order

discontinuance of the operation of the drinking water systems which do not comply with these requisites.

2. The water systems to be built the Revolving Fund Program should comply with Sections 1452, 1419 and 1420 of the Federal Safe Drinking Water Act, as amended; also they should comply with the federal guides or provisions of the Federal Code Regulations, as applicable, as well as with the procedures established by the Department under said program.

1.05 Variations and Exemptions.

1. The Department may grant variations and exemptions from specified provisions in accordance with Title 40, Part 1414 of the CFR as provided by the Federal Safe Drinking Water Act of December 16, 1976, as amended.

1.06 Additional Requisites.

1. The provisions of Section 1 of this Article should in no way be construed as a limitation of the authority of the Secretary to establish additional requisites or more stringent standards to those provided on Federal Drinking Water Act of 1974, as it may be amended, and Federal Code Regulations, as may be amended, with the purpose of safeguarding public health.

Section 2.00 BOTTLED WATER

2.01 Requisites for Processing and Bottling.

1. All plants engaged in bottling water for human consumption in Puerto Rico should comply the water processing and bottling requisites provided on Title 21, Part 129 of the Federal Code Regulations, as amended.

2.02 Specific Requisites for Bottled Water.

1. Water bottled in Puerto Rico and all imported bottled water should comply with the quality standards and specific requisites for bottled water establish in Title 21, Part 165.110 of the CFR, as amended.

2.03 Labelling of Containers for Water and Water Products.

1. Water bottled in Puerto Rico and all bottled water imported from plants located outside of Puerto Rico should comply with the provisions of Title 2, Part 101 of the CFR, as amended.

2.04 Sound Manufacturing Practices.

1. The provisions for sound manufacturing practices contained in Title 21, Part 110 of the CFR will apply to the water bottling plants in Puerto Rico.

2.05 Bottling Plants Outside of Puerto Rico.

1. Water from all water bottling plants located outside of Puerto Rico, sold displayed, distributed, offered for sale or donation in Puerto Rico should comply with the water standards established in these Regulations.

2.06 Quality Control.

1. It will be the responsability of the operator to make sure that sample representative of the water bottled by the plant be analyzed by a certified laboratory, following the frequency and for the parameters specified on Title 21, Part 129, Section 129.80, Sub-part E of the CFR.





LT2ESWTR Privacy Revision Crosswalk

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
SUBPART A GENERAL			
'141.2 DEFINITIONS			
Bag filters	'141.2	Adopted by Reference	
Bank filtration	'141.2	Adopted by Reference	
Cartridge filters	'141.2	Adopted by Reference	
Flowing stream	'141.2	Adopted by Reference	
Lake/reservoir	'141.2	Adopted by Reference	
Membrane filtration	'141.2	Adopted by Reference	
Plant intake	'141.2	Adopted by Reference	
Presedimentation	'141.2	Adopted by Reference	
Two-stage lime softening	'141.2	Adopted by Reference	
Uncovered finished water reservoir	'141.2	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
SUBPART QB PUBLIC NOTIFICATION OF DRINKING WATER VIOLATIONS			
¶141.211 SPECIAL NOTICE FOR REPEATED FAILURE TO CONDUCT MONITORING OF THE SOURCE WATER FOR <i>CRYPTOSPORIDIUM</i> AND OR FAILURE TO DETERMINE BIN CLASSIFICATION OR MEAN <i>CRYPTOSPORIDIUM</i> LEVEL.			
The owner or operator of a community or non-community water system that is required to monitor source water under § 141.701 must notify persons served by the water system that monitoring has not been completed as specified no later than 30 days after the system has failed to collect any 3 months of monitoring as specified in § 141.701(c). The notice must be repeated as specified in § 141.203(b).	¶141.211(a)	Adopted by Reference	
Systems must give special notice for failure to determine bin classification or mean <i>Cryptosporidium</i> level	¶141.211(b)	Adopted by Reference	
The public notice must follow the requirements for a Tier 2 public notice prescribed in ¶ 141.203(c). The public notice must be presented as required in ¶ 141.205(c).	¶141.211(c)	Adopted by Reference	
Mandatory language must be included in the special notice. The special notice for repeated failure to conduct monitoring must contain the following language: We are required to monitor the source of your drinking water for <i>Cryptosporidium</i> . Results of the monitoring are to be used to determine whether water treatment at the (treatment plant name) is sufficient to adequately remove <i>Cryptosporidium</i> from your drinking water. We are required to complete this monitoring and make this determination by (required bin determination date). We “did not monitor or test” or “did not complete all monitoring or testing” on schedule and, therefore, we may	¶141.211(d)(1)-(3)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
<p>not be able to determine by the required date what treatment modifications, if any, must be made to ensure adequate <i>Cryptosporidium</i> removal. Missing this deadline may, in turn, jeopardize our ability to have the required treatment modifications, if any, completed by the deadline required, (date). For more information, please call (name of water system contact) of (name of water system) at (phone number).</p> <p>The special notice for failure to determine bin classification or mean <i>Cryptosporidium</i> level must contain the following language: We are required to monitor the source of your drinking water for <i>Cryptosporidium</i> in order to determine by (date) whether water treatment at the (treatment plant name) is sufficient to adequately remove <i>Cryptosporidium</i> from your drinking water. We have not made this determination by the required date. Our failure to do this may jeopardize our ability to have the required treatment modifications, if any, completed by the required deadline of (date). For more information, please call (name of water system contact) of (name of water system) at (phone number).</p> <p>Each special notice must also include a description of what the system is doing to correct the violation and when the system expects to return to compliance or resolve the situation.</p>			

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
APPENDIX A TO SUBPART Q OF PART 141BNPDWR VIOLATIONS AND OTHER SITUATIONS REQUIRING PUBLIC NOTICE			
<p>10. LT2EWTR violations</p> <p>MCL/MRDL/TT Violations</p> <p>Tier of Public Notice Required Citation</p> <p>2 141.710B141.720</p> <p>Monitoring and Testing Procedure Violations</p> <p>Tier of Public Notice Required Citation</p> <p>2*, 3 141.701B141.705; 141.708B141.709</p> <p>* Failure to collect at least 3 samples for <i>Cryptosporidium</i> analysis is a Tier 2 violation requiring special notice.</p>	Appendix A I.A.10	Adopted by Reference	
SUBPART WBENHANCED FILTRATION AND DISINFECTION FOR <i>CRYPTOSPORIDIUM</i>			
141.700 GENERAL REQUIREMENTS			
The requirements of this subpart W are NPDWR. The regulations in this subpart establish or extend TT requirements in lieu of MCLs for <i>Cryptosporidium</i> . These requirements are in addition to requirements for filtration and disinfection in subparts H, P, and T of this part.	141.700(a)	Adopted by Reference	
<i>Applicability.</i> The requirements of this subpart apply to all subpart H systems, which are PWSs supplied by a surface water source and PWSs supplied by a ground water source under the direct influence of surface water.	141.700(b)	Adopted by Reference	

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Wholesale systems, as defined in §141.2, must comply with the requirements of this subpart based on the population of the largest system in the combined distribution system.	§141.700(b)(1)	Adopted by Reference	
The requirements of this subpart for filtered systems apply to systems required by NPDWR to provide filtration treatment, whether or not the system is currently operating a filtration system.	§141.700(b)(2)	Adopted by Reference	
The requirements of this subpart for unfiltered systems apply only to unfiltered systems that timely met and continue to meet the filtration avoidance criteria in subparts H, P, and T of this part, as applicable.	§141.700(b)(3)	Adopted by Reference	
<i>Requirements.</i> Systems subject to this subpart must comply with the following requirements:	§141.700(c)	Adopted by Reference	
Systems must conduct an initial and a second round of source water monitoring for each plant that treats a surface water or GWUDI source. This monitoring may include sampling for <i>Cryptosporidium</i> , <i>E. coli</i> , and turbidity as described in §§141.701 through 141.706, to determine what level, if any, of additional <i>Cryptosporidium</i> treatment they must provide.	§141.700(c)(1)	Adopted by Reference	
Systems that plan to make a significant change to their disinfection practice must develop disinfection profiles and calculate disinfection benchmarks, as described in §§141.708 through 141.709.	§141.700(c)(2)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Filtered systems must determine their <i>Cryptosporidium</i> treatment bin classification as described in §141.710 and provide additional treatment for <i>Cryptosporidium</i> , if required, as described in §141.711. All unfiltered systems must provide treatment for <i>Cryptosporidium</i> as described in §141.712. Filtered and unfiltered systems must implement <i>Cryptosporidium</i> treatment according to the schedule in §141.713.	§141.700(c)(3)	Adopted by Reference	
Systems with uncovered finished water storage facilities must comply with the requirements to cover the facility or treat the discharge from the facility as described in §141.714.	§141.700(c)(4)	Adopted by Reference	
Systems required to provide additional treatment for <i>Cryptosporidium</i> must implement microbial toolbox options that are designed and operated as described in §§141.715 through 141.720.	§141.700(c)(5)	Adopted by Reference	
Systems must comply with the applicable recordkeeping and reporting requirements described in §§141.721 through 141.722.	§141.700(c)(6)	Adopted by Reference	
Systems must address significant deficiencies identified in sanitary surveys performed by EPA as described in §141.723.	§141.700(c)(7)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
141.701 SOURCE WATER MONITORING			
Systems must conduct the following monitoring on the schedule in paragraph (c) of this section unless they meet the monitoring exemption criteria in paragraph (d) of this section.	141.701(a)	Adopted by Reference	
Filtered systems serving at least 10,000 people must sample their source water for <i>Cryptosporidium</i> , <i>E. coli</i> , and turbidity at least monthly for 24 months.	141.701(a)(1)	Adopted by Reference	
Unfiltered systems serving at least 10,000 people must sample their source water for <i>Cryptosporidium</i> at least monthly for 24 months.	141.701(a)(2)	Adopted by Reference	
Filtered systems serving fewer than 10,000 people must sample their source water for <i>E. coli</i> at least once every two weeks for 12 months.	141.701(a)(3)(i)		
A filtered system serving fewer than 10,000 people may avoid <i>E. coli</i> monitoring if the system notifies the state that it will monitor for <i>Cryptosporidium</i> as described in paragraph (a)(4) of this section. The system must notify the state no later than 3 months prior to the date the system is otherwise required to start <i>E. coli</i> monitoring under § 141.701(c).	141.701(a)(3)(ii)	Adopted by Reference	
Filtered systems serving fewer than 10,000 people must sample their source water for <i>Cryptosporidium</i> at least twice per month for 12 months or at least monthly for 24 months if they meet one of the following, based on monitoring conducted under paragraph (a)(3) of this section:	141.701(a)(4)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
For systems using lake/reservoir sources, the annual mean <i>E. coli</i> concentration is greater than 10 <i>E. coli</i> / 100 mL.	141.701(a)(4)(i)	Adopted by Reference	
For systems using flowing stream sources, the annual mean <i>E. coli</i> concentration is greater than 50 <i>E. coli</i> / 100 mL.	141.701(a)(4)(ii)	Adopted by Reference	
The system does not conduct <i>E. coli</i> monitoring as described in paragraph (a)(3) of this section.	141.701(a)(4)(iii)	Adopted by Reference	
Systems using ground water under the direct influence of surface water (GWUDI) must comply with the requirements of paragraph (a)(4) of this section based on the <i>E. coli</i> level that applies to the nearest surface water body. If no surface water body is nearby, the system must comply based on the requirements that apply to systems using lake/reservoir sources.	141.701(a)(4)(iv)	Adopted by Reference	
For filtered systems serving fewer than 10,000 people, the state may approve monitoring for an indicator other than <i>E. coli</i> under paragraph (a)(3) of this section. The state also may approve an alternative to the <i>E. coli</i> concentration in paragraph (a)(4)(i), (ii) or (iv) of this section to trigger <i>Cryptosporidium</i> monitoring. This approval by the state must be provided to the system in writing and must include the basis for the state's determination that the alternative indicator and/or trigger level will provide a more accurate identification of whether a system will exceed the Bin 1 <i>Cryptosporidium</i> level in § 141.710.	141.701(a)(5)	Adopted by Reference	

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Unfiltered systems serving fewer than 10,000 people must sample their source water for <i>Cryptosporidium</i> at least twice per month for 12 months or at least monthly for 24 months.	141.701(a)(6)	Adopted by Reference	
Systems may sample more frequently than required under this section if the sampling frequency is evenly spaced throughout the monitoring period.	141.701(a)(7)	Adopted by Reference	
Systems must conduct a second round of source water monitoring that meets the requirements for monitoring parameters, frequency, and duration described in paragraph (a) of this section, unless they meet the monitoring exemption criteria in paragraph (d) of this section. Systems must conduct this monitoring on the schedule in paragraph (c) of this section.	141.701(b)	Adopted by Reference	
Systems must begin monitoring required in 141.701(a) and (b) no later than the month beginning with the date listed in this section.	141.701(c)	Adopted by Reference	
<i>Monitoring Avoidance.</i> Filtered systems are not required to conduct source water monitoring under this subpart if the system will provide a total of at least 5.5-log of treatment for <i>Cryptosporidium</i> , equivalent to meeting the treatment requirements of Bin 4 in § 141.711.	141.701(d)(1)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Unfiltered systems are not required to conduct source water monitoring under this subpart if the system will provide a total of at least 3-log <i>Cryptosporidium</i> inactivation, equivalent to meeting the treatment requirements for unfiltered systems with a mean <i>Cryptosporidium</i> concentration of greater than 0.01 oocysts/L in § 141.712.	¶ 141.701(d)(2)	Adopted by Reference	
If a system chooses to provide the level of treatment in paragraph (d)(1) or (2) of this section, as applicable, rather than start source water monitoring, the system must notify the state in writing no later than the date the system is otherwise required to submit a sampling schedule for monitoring under § 141.702. Alternatively, a system may choose to stop sampling at any point after it has initiated monitoring if it notifies the state in writing that it will provide this level of treatment. Systems must install and operate technologies to provide this level of treatment by the applicable treatment compliance date in § 141.713.	¶ 141.701(d)(3)	Adopted by Reference	
<i>Plants operating only part of the year.</i> Systems with subpart H plants that operate for only part of the year must conduct source water monitoring in accordance with this subpart, but with the following modifications:	¶ 141.701(e)	Adopted by Reference	
Systems must sample their source water only during the months that the plant operates unless the state specifies another monitoring period based on plant operating practices.	¶ 141.701(e)(1)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Systems with plants that operate less than six months per year and that monitor for <i>Cryptosporidium</i> must collect at least six <i>Cryptosporidium</i> samples per year during each of two years of monitoring. Samples must be evenly spaced throughout the period the plant operates.	141.701(e)(2)	Adopted by Reference	
<i>New sources.</i> A system that begins using a new source of surface water or GWUDI after the system is required to begin monitoring under paragraph (c) of this section must monitor the new source on a schedule the state approves. Source water monitoring must meet the requirements of this subpart. The system must also meet the bin classification and <i>Cryptosporidium</i> treatment requirements of §§ 141.710 and 141.711 or § 141.712, as applicable, for the new source on a schedule the state approves.	141.701(f)(1)	Adopted by Reference	
The requirements of § 141.701(f) apply to subpart H systems that begin operation after the monitoring start date applicable to the system's size under paragraph (c) of this section.	141.701(f)(2)	Adopted by Reference	
The system must begin a second round of source water monitoring no later than 6 years following initial bin classification under § 141.710 or determination of the mean <i>Cryptosporidium</i> level under § 141.712, as applicable.	141.701(f)(3)	Adopted by Reference	
Failure to collect any source water sample required under this section in accordance with the sampling schedule, sampling location, analytical method, approved laboratory, and reporting requirements of §§ 141.702 through 141.706 is a monitoring violation.	141.701(g)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Systems may use (grandfather) monitoring data collected prior to the applicable monitoring start date in paragraph (c) of this section to meet the initial source water monitoring requirements in paragraph (a) of this section. Grandfathered data may substitute for an equivalent number of months at the end of the monitoring period. All data submitted under this paragraph must meet the requirements in § 141.707.	¶ 141.701(h)	Adopted by Reference	
¶ 141.702 SAMPLING SCHEDULES			
Systems required to conduct source water monitoring under § 141.701 must submit a sampling schedule that specifies the calendar dates when the system will collect each required sample.	¶ 141.702(a)	Adopted by Reference	
Systems must submit sampling schedules no later than 3 months prior to the applicable date listed in § 141.701(c) for each round of required monitoring.	¶ 141.702(a)(1)	Adopted by Reference	
Systems serving at least 10,000 people must submit their sampling schedule for the initial round of source water monitoring under § 141.701(a) to EPA electronically at https://intranet.epa.gov/lt2/ .	¶ 141.702(a)(2)(i)	Adopted by Reference	
If a system is unable to submit the sampling schedule electronically, the system may use an alternative approach for submitting the sampling schedule that EPA approves.	¶ 141.702(a)(2)(ii)	Adopted by Reference	
Systems serving fewer than 10,000 people must submit their sampling schedules for the initial round of source water monitoring § 141.701(a) to the state.	¶ 141.702(a)(3)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Systems must submit sampling schedules for the second round of source water monitoring § 141.701(b) to the state.	141.702(a)(4)	Adopted by Reference	
If EPA or the state does not respond to a system regarding its sampling schedule, the system must sample at the reported schedule.	141.702(a)(5)	Adopted by Reference	
Systems must collect samples within two days before or two days after the dates indicated in their sampling schedule (i.e., within a five-day period around the schedule date) unless one of the conditions of paragraph (b)(1) or (2) of this section applies.	141.702(b)	Adopted by Reference	
If an extreme condition or situation exists that may pose danger to the sample collector, or that cannot be avoided and causes the system to be unable to sample in the scheduled five-day period, the system must sample as close to the scheduled date as is feasible unless the state approves an alternative sampling date. The system must submit an explanation for the delayed sampling date to the state concurrent with the shipment of the sample to the laboratory.	141.702(b)(1)	Adopted by Reference	
If a system is unable to report a valid analytical result for a scheduled sampling date due to equipment failure, loss of or damage to the sample, failure to comply with the analytical method requirements, including the quality control requirements in § 141.704, or the failure of an approved laboratory to analyze the sample, then the system must collect a replacement sample.	141.702(b)(2)(i)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
The system must collect the replacement sample not later than 21 days after receiving information that an analytical result cannot be reported for the scheduled date unless the system demonstrates that collecting a replacement sample within this time frame is not feasible or the state approves an alternative resampling date. The system must submit an explanation for the delayed sampling date to the state concurrent with the shipment of the sample to the laboratory.	141.702(b)(2)(ii)	Adopted by Reference	
Systems that fail to meet the criteria of paragraph (b) of this section for any source water sample required under § 141.701 must revise their sampling schedules to add dates for collecting all missed samples. Systems must submit the revised schedule to the state for approval prior to when the system begins collecting the missed samples.	141.702(c)	Adopted by Reference	
141.703 SAMPLING LOCATIONS			
Systems required to conduct source water monitoring under § 141.701 must collect samples for each plant that treats a surface water or GWUDI source. Where multiple plants draw water from the same influent, such as the same pipe or intake, the state may approve one set of monitoring results to be used to satisfy the requirements of § 141.701 for all plants.	141.703(a)	Adopted by Reference	
Systems must collect source water samples prior to chemical treatment, such as coagulants, oxidants and disinfectants, unless the system meets the condition of paragraph (b)(2) of this section.	141.703(b)(1)	Adopted by Reference	

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The state may approve a system to collect a source water sample after chemical treatment. To grant this approval, the state must determine that collecting a sample prior to chemical treatment is not feasible for the system and that the chemical treatment is unlikely to have a significant adverse effect on the analysis of the sample.	141.703(b)(2)	Adopted by Reference	
Systems that recycle filter backwash water must collect source water samples prior to the point of filter backwash water addition.	141.703(c)	Adopted by Reference	
<i>Bank filtration.</i> Systems that receive <i>Cryptosporidium</i> treatment credit for bank filtration under § 141.173(b) or § 141.552(a), as applicable, must collect source water samples in the surface water prior to bank filtration.	141.703(d)(1)	Adopted by Reference	
Systems that use bank filtration as pretreatment to a filtration plant must collect source water samples from the well (i.e., after bank filtration). Use of bank filtration during monitoring must be consistent with routine operational practice. Systems collecting samples after a bank filtration process may not receive treatment credit for the bank filtration under § 141.717(c).	141.703(d)(2)	Adopted by Reference	
<i>Multiple sources.</i> Systems with plants that use multiple water sources, including multiple surface water sources and blended surface water and ground water sources, must collect samples as specified in paragraph (e)(1) or (2) of this section. The use of multiple sources during monitoring must be consistent with routine operational practice.	141.703(e)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
If a sampling tap is available where the sources are combined prior to treatment, systems must collect samples from the tap.	141.703(e)(1)	Adopted by Reference	
If a sampling tap where the sources are combined prior to treatment is not available, systems must collect samples at each source near the intake on the same day and must follow either paragraph (e)(2)(i) or (ii) of this section for sample analysis.	141.703(e)(2)	Adopted by Reference	
Systems may composite samples from each source into one sample prior to analysis. The volume of sample from each source must be weighted according to the proportion of the source in the total plant flow at the time the sample is collected.	141.703(e)(2)(i)	Adopted by Reference	
Systems may analyze samples from each source separately and calculate a weighted average of the analysis results for each sampling date. The weighted average must be calculated by multiplying the analysis result for each source by the fraction the source contributed to total plant flow at the time the sample was collected and then summing these values.	141.703(e)(2)(ii)	Adopted by Reference	

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<i>Additional Requirements</i> Systems must submit a description of their sampling location(s) to the state at the same time as the sampling schedule required under § 141.702. This description must address the position of the sampling location in relation to the system's water source(s) and treatment processes, including pretreatment, points of chemical treatment, and filter backwash recycle. If the state does not respond to a system regarding sampling location(s), the system must sample at the reported location(s).	141.703(f)	Adopted by Reference	
141.704 ANALYTICAL METHODS			
<i>Cryptosporidium</i> . Systems must analyze for <i>Cryptosporidium</i> using <i>Method 1623: Cryptosporidium and Giardia in Water by Filtration/IMS/FA</i> (EPA-815-R-05-002) or <i>Method 1622: Cryptosporidium in Water by Filtration/IMS/FA</i> (EPA-815-R-05-001), which are incorporated by reference.	141.704(a)	Adopted by Reference	
Systems must analyze at least a 10 L sample or a packed pellet volume of at least 2 mL as generated by the methods listed in paragraph (a) of this section. Systems unable to process a 10 L sample must analyze as much sample volume as can be filtered by two filters approved by EPA for the methods listed in paragraph (a) of this section, up to a packed pellet volume of at least 2 mL.	141.704(a)(1)	Adopted by Reference	
Matrix spike (MS) samples, as required by the methods in paragraph (a) of this section, must be spiked and filtered by a laboratory approved for <i>Cryptosporidium</i> analysis under § 141.705.	141.704(a)(2)(i)	Adopted by Reference	

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If the volume of the MS sample is greater than 10 L, the system may filter all but 10 L of the MS sample in the field, and ship the filtered sample and the remaining 10 L of source water to the laboratory. In this case, the laboratory must spike the remaining 10 L of water and filter it through the filter used to collect the balance of the sample in the field.	141.704(a)(2)(ii)	Adopted by Reference	
Flow cytometer-counted spiking suspensions must be used for MS samples and ongoing precision and recovery (OPR) samples.	141.704(a)(3)	Adopted by Reference	
<i>E. coli</i> . Systems must use methods for enumeration of <i>E. Coli</i> in source water approved in § 136.3(a) of this title.	141.704(b)	Adopted by Reference	
The time from sample collection to initiation of analysis may not exceed 30 hours unless the system meets the condition of paragraph (b)(2) of this section.	141.704(b)(1)	Adopted by Reference	
The state may approve on a case- by-case basis the holding of an <i>E. Coli</i> sample for up to 48 hours between sample collection and initiation of analysis if the state determines that analyzing an <i>E. Coli</i> sample within 30 hours is not feasible. <i>E. Coli</i> samples held between 30 to 48 hours must be analyzed by the Colilert reagent version of Standard Method 9223B as listed in § 136.3(a) of this title.	141.704(b)(2)	Adopted by Reference	
Systems must maintain samples between 0°C and 10°C during storage and transit to the laboratory.	141.704(b)(3)	Adopted by Reference	
<i>Turbidity</i> . Systems must use methods for turbidity measurement approved in § 141.74(a)(1).	141.704(c)	Adopted by Reference	

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141.705 REQUIREMENTS FOR USE OF AN APPROVED LABORATORY			
<i>Cryptosporidium</i> . Systems must have <i>Cryptosporidium</i> samples analyzed by a laboratory that is approved under EPA's Laboratory Quality Assurance Evaluation Program for Analysis of <i>Cryptosporidium</i> in Water or a laboratory that has been certified for <i>Cryptosporidium</i> analysis by an equivalent state laboratory certification program.	141.705(a)	Adopted by Reference	
<i>E. coli</i> . Any laboratory certified by the EPA, the National Environmental Laboratory Accreditation Conference or the state for total coliform or fecal coliform analysis under § 141.74 is approved for <i>E. Coli</i> analysis under this subpart when the laboratory uses the same technique for <i>E. Coli</i> that the laboratory uses for § 141.74.	141.705(b)	Adopted by Reference	
<i>Turbidity</i> . Measurements of turbidity must be made by a party approved by the state.	141.705(c)	Adopted by Reference	
141.706 REPORTING SOURCE WATER MONITORING RESULTS			
Systems must report results from the source water monitoring required under § 141.701 no later than 10 days after the end of the first month following the month when the sample is collected.	141.706(a)	Adopted by Reference	
All systems serving at least 10,000 people must report the results from the initial source water monitoring required under § 141.701(a) to EPA electronically at https://intranet.epa.gov/lt2/ .	141.706(b)(1)	Adopted by Reference	

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If a system is unable to report monitoring results electronically, the system may use an alternative approach for reporting monitoring results that EPA approves.	141.706(b)(2)	Adopted by Reference	
Systems serving fewer than 10,000 people must report results from the initial source water monitoring required under § 141.701(a) to the state.	141.706(c)	Adopted by Reference	
All systems must report results from the second round of source water monitoring required under § 141.701(b) to the state.	141.706(d)	Adopted by Reference	
Systems must report the applicable information in paragraphs (e)(1) and (2) of this section for the source water monitoring required under § 141.701.	141.706(e)	Adopted by Reference	
Systems must report the following data elements for each <i>Cryptosporidium</i> analysis: (1) PWS ID (2) Facility ID (3) Sample collection date (4) Sample type (field or matrix spike) (5) Sample volume filtered (L), to nearest 1/4 L (6) Was 100% of filtered volume examined (7) Number of oocysts counted	141.706(e)(1)	Adopted by Reference	
For matrix spike samples, systems must also report the sample volume spiked and estimated number of oocysts spiked. These data are not required for field samples.	141.706(e)(1)(i)	Adopted by Reference	

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For samples in which less than 10 L is filtered or less than 100% of the sample volume is examined, systems must also report the number of filters used and the packed pellet volume.	141.706(e)(1)(ii)	Adopted by Reference	
For samples in which less than 100% of sample volume is examined, systems must also report the volume of resuspended concentrate and volume of this resuspension processed through immunomagnetic separation.	141.706(e)(1)(iii)	Adopted by Reference	
Systems must report the following data elements for each <i>E. coli</i> analysis: (1) PWS ID (2) Facility ID (3) Sample collection date (4) Analytical method number (5) Method type (6) Source type (flowing stream, lake/reservoir, GWUDI) (7) <i>E. coli</i> /100 mL (8) Turbidity (Systems serving fewer than 10,000 people that are not required to monitor for turbidity under 141.701(c) are not required to report turbidity with their <i>E. coli</i> results.)	141.706(e)(2)	Adopted by Reference	

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141.707 GRANDFATHERING PREVIOUSLY COLLECTED DATA			
Systems may comply with the initial source water monitoring requirements of § 141.701(a) by grandfathering sample results collected before the system is required to begin monitoring (i.e., previously collected data). To be grandfathered, the sample results and analysis must meet the criteria in this section and the state must approve.	141.707(a)(1)	Adopted by Reference	
A filtered system may grandfather <i>Cryptosporidium</i> samples to meet the requirements of § 141.701(a) when the system does not have corresponding <i>E. Coli</i> and turbidity samples. A system that grandfathers <i>Cryptosporidium</i> samples without <i>E. Coli</i> and turbidity samples is not required to collect <i>E. Coli</i> and turbidity samples when the system completes the requirements for <i>Cryptosporidium</i> monitoring under § 141.701(a).	141.707(a)(2)	Adopted by Reference	
<i>E. coli</i> sample analysis. The analysis of <i>E. Coli</i> samples must meet the analytical method and approved laboratory requirements of §§ 141.704 through 141.705.	141.707(b)	Adopted by Reference	
<i>Cryptosporidium</i> sample analysis. The analysis of <i>Cryptosporidium</i> samples must meet the criteria in this paragraph.	141.707(c)	Adopted by Reference	
Laboratories analyzed <i>Cryptosporidium</i> samples using one of the analytical methods in paragraphs (c)(1)(i) through (vi) of this section, which are incorporated by reference.	141.707(c)(1)	Adopted by Reference	
<i>Method 1623: Cryptosporidium and Giardia in Water by Filtration/IMS/FA</i> , 2005, United States Environmental Protection Agency, EPA-815-R-05-002.	141.707(c)(1)(i)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
<i>Method 1622: Cryptosporidium in Water by Filtration/IMS/FA</i> , 2005, United States Environmental Protection Agency, EPA-815-R-05-001.	141.707(c)(1)(ii)	Adopted by Reference	
<i>Method 1623: Cryptosporidium and Giardia in Water by Filtration/IMS/FA</i> , 2001, United States Environmental Protection Agency, EPA-821-R-01-025.	141.707(c)(1)(iii)	Adopted by Reference	
<i>Method 1622: Cryptosporidium in Water by Filtration/IMS/FA</i> , 2001, United States Environmental Protection Agency, EPA-821-R-01-026.	141.707(c)(1)(iv)	Adopted by Reference	
<i>Method 1623: Cryptosporidium and Giardia in Water by Filtration/IMS/FA</i> , 1999, United States Environmental Protection Agency, EPA-821-R-99-006.	141.707(c)(1)(v)	Adopted by Reference	
<i>Method 1622: Cryptosporidium in Water by Filtration/IMS/FA</i> , 1999, United States Environmental Protection Agency, EPA-821-R-99-001.	141.707(c)(1)(vi)	Adopted by Reference	
For each <i>Cryptosporidium</i> sample, the laboratory analyzed at least 10 L of sample or at least 2 mL of packed pellet or as much volume as could be filtered by 2 filters that EPA approved for the methods listed in paragraph (c)(1) of this section.	141.707(c)(2)	Adopted by Reference	
<i>Sampling location.</i> The sampling location must meet the conditions in § 141.703.	141.707(d)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
<i>Sampling frequency.</i> <i>Cryptosporidium</i> samples were collected no less frequently than each calendar month on a regular schedule, beginning no earlier than January 1999. Sample collection intervals may vary for the conditions specified in § 141.702(b)(1) and (2) if the system provides documentation of the condition when reporting monitoring results.	141.707(e)	Adopted by Reference	
The state may approve grandfathering of previously collected data where there are time gaps in the sampling frequency if the system conducts additional monitoring the state specifies to ensure that the data used to comply with the initial source water monitoring requirements of § 141.701(a) are seasonally representative and unbiased.	141.707(e)(1)	Adopted by Reference	
Systems may grandfather previously collected data where the sampling frequency within each month varied. If the <i>Cryptosporidium</i> sampling frequency varied, systems must follow the monthly averaging procedure in § 141.710(b)(5) or § 141.712(a)(3), as applicable, when calculating the bin classification for filtered systems or the mean <i>Cryptosporidium</i> concentration for unfiltered systems.	141.707(e)(2)	Adopted by Reference	
<i>Reporting monitoring results for grandfathering.</i> Systems that request to grandfather previously collected monitoring results must report the following information by the applicable dates listed in this paragraph. Systems serving at least 10,000 people must report this information to EPA unless the state approves reporting to the state rather than EPA. Systems serving fewer than 10,000 people must report this information to the state.	141.707(f)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Systems must report that they intend to submit previously collected monitoring results for grandfathering. This report must specify the number of previously collected results the system will submit, the dates of the first and last sample, and whether a system will conduct additional source water monitoring to meet the requirements of § 141.701(a). Systems must report this information no later than the date the sampling schedule under § 141.702 is required.	141.707(f)(1)	Adopted by Reference	
Systems must report previously collected monitoring results for grandfathering, along with the associated documentation listed in paragraphs (f)(2)(i) through (iv) of this section, no later than two months after the applicable date listed in § 141.701(c).	141.707(f)(2)	Adopted by Reference	
For each sample result, systems must report the applicable data elements in § 141.706.	141.707(f)(2)(i)	Adopted by Reference	
Systems must certify that the reported monitoring results include all results the system generated during the time period beginning with the first reported result and ending with the final reported result. This applies to samples that were collected from the sampling location specified for source water monitoring under this subpart, not spiked, and analyzed using the laboratory's routine process for the analytical methods listed in this section.	141.707(f)(2)(ii)	Adopted by Reference	

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Systems must certify that the samples were representative of a plant's source water(s) and the source water(s) have not changed. Systems must report a description of the sampling location(s), which must address the position of the sampling location in relation to the system's water source(s) and treatment processes, including points of chemical addition and filter backwash recycle.	141.707(f)(2)(iii)	Adopted by Reference	
For <i>Cryptosporidium</i> samples, the laboratory or laboratories that analyzed the samples must provide a letter certifying that the quality control criteria specified in the methods listed in paragraph (c)(1) of this section were met for each sample batch associated with the reported results. Alternatively, the laboratory may provide bench sheets and sample examination report forms for each field, matrix spike, IPR, OPR, and method blank sample associated with the reported results.	141.707(f)(2)(iv)	Adopted by Reference	
If the state determines that a previously collected data set submitted for grandfathering was generated during source water conditions that were not normal for the system, such as a drought, the state may disapprove the data. Alternatively, the state may approve the previously collected data if the system reports additional source water monitoring data, as determined by the state, to ensure that the data set used under § 141.710 or § 141.712 represents average source water conditions for the system.	141.707(g)	Adopted by Reference	

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If a system submits previously collected data that fully meet the number of samples required for initial source water monitoring under § 141.701(a) and some of the data are rejected due to not meeting the requirements of this section, systems must conduct additional monitoring to replace rejected data on a schedule the state approves. Systems are not required to begin this additional monitoring until two months after notification that data have been rejected and additional monitoring is necessary.	141.707(h)	Adopted by Reference	
141.708 REQUIREMENTS WHEN MAKING A SIGNIFICANT CHANGE IN DISINFECTION PRACTICE			
Following the completion of initial source water monitoring under § 141.701(a), a system that plans to make a significant change to its disinfection practice, as defined in paragraph (b) of this section, must develop disinfection profiles and calculate disinfection benchmarks for <i>Giardia lamblia</i> and viruses as described in § 141.709. Prior to changing the disinfection practice, the system must notify the state and must include in this notice the information in paragraphs (a)(1) through (3) of this section	141.708(a)	Adopted by Reference	
A completed disinfection profile and disinfection benchmark for <i>Giardia lamblia</i> and viruses as described in § 141.709.	141.708(a)(1)	Adopted by Reference	
A description of the proposed change in disinfection practice.	141.708(a)(2)	Adopted by Reference	

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An analysis of how the proposed change will affect the current level of disinfection.	141.708(a)(3)	Adopted by Reference	
Significant changes to disinfection practice are defined as follows:	141.708(b)	Adopted by Reference	
Changes to the point of disinfection;	141.708(b)(1)	Adopted by Reference	
Changes to the disinfectant(s) used in the treatment plant;	141.708(b)(2)	Adopted by Reference	
Changes to the disinfection process; or	141.708(b)(3)	Adopted by Reference	
Any other modification identified by the state as a significant change to disinfection practice.	141.708(b)(4)	Adopted by Reference	
141.709 DEVELOPING A PROFILE			
Systems required to develop disinfection profiles under § 141.708 must follow the requirements of this section. Systems must monitor at least weekly for a period of 12 consecutive months to determine the total log inactivation for <i>Giardia lamblia</i> and viruses. If systems monitor more frequently, the monitoring frequency must be evenly spaced. Systems that operate for fewer than 12 months per year must monitor weekly during the period of operation. Systems must determine log inactivation for <i>Giardia lamblia</i> through the entire plant, based on CT99.9 values in Tables 1.1 through 1.6, 2.1 and 3.1 of § 141.74(b) as applicable. Systems must determine log inactivation for viruses through the entire treatment plant based on a protocol approved by the state.	141.709(a)	Adopted by Reference	

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Systems with a single point of disinfectant application prior to the entrance to the distribution system must conduct the monitoring in paragraphs (b)(1) through (4) of this section. Systems with more than one point of disinfectant application must conduct the monitoring in paragraphs (b)(1) through (4) of this section for each disinfection segment. Systems must monitor the parameters necessary to determine the total inactivation ratio, using analytical methods in § 141.74(a).	141.709(b)	Adopted by Reference	
For systems using a disinfectant other than UV, the temperature of the disinfected water must be measured at each residual disinfectant concentration sampling point during peak hourly flow or at an alternative location approved by the state.	141.709(b)(1)	Adopted by Reference	
For systems using chlorine, the pH of the disinfected water must be measured at each chlorine residual disinfectant concentration sampling point during peak hourly flow or at an alternative location approved by the state.	141.709(b)(2)	Adopted by Reference	
The disinfectant contact time(s) (t) must be determined during peak hourly flow.	141.709(b)(3)	Adopted by Reference	
The residual disinfectant concentration(s) (C) of the water before or at the first customer and prior to each additional point of disinfectant application must be measured during peak hourly flow.	141.709(b)(4)	Adopted by Reference	
In lieu of conducting new monitoring under paragraph (b) of this section, systems may elect to meet the requirements of paragraphs (c)(1) or (2) of this section.	141.709(c)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Systems that have at least one year of existing data that are substantially equivalent to data collected under the provisions of paragraph (b) of this section may use these data to develop disinfection profiles as specified in this section if the system has neither made a significant change to its treatment practice nor changed sources since the data were collected. Systems may develop disinfection profiles using up to three years of existing data.	141.709(c)(1)	Adopted by Reference	
Systems may use disinfection profile(s) developed under § 141.172 or §§ 141.530 through 141.536 in lieu of developing a new profile if the system has neither made a significant change to its treatment practice nor changed sources since the profile was developed. Systems that have not developed a virus profile under § 141.172 or §§ 141.530 through 141.536 must develop a virus profile using the same monitoring data on which the <i>Giardia lamblia</i> profile is based.	141.709(c)(2)	Adopted by Reference	
Systems must calculate the total inactivation ratio for <i>Giardia lamblia</i> as specified in paragraphs (d)(1) through (3) of this section.	141.709(d)	Adopted by Reference	
Systems using only one point of disinfectant application may determine the total inactivation ratio for the disinfection segment based on either of the methods in paragraph (d)(1)(i) or (ii) of this section.	141.709(d)(1)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Determine one inactivation ratio ($CT_{calc}/CT_{99.9}$) before or at the first customer during peak hourly flow.	141.709(d)(1)(i)	Adopted by Reference	
Determine successive $CT_{calc}/CT_{99.9}$ values, representing sequential inactivation ratios, between the point of disinfectant application and a point before or at the first customer during peak hourly flow. The system must calculate the total inactivation ratio by determining ($CT_{calc}/CT_{99.9}$) for each sequence and then adding the ($CT_{calc}/CT_{99.9}$) values together to determine ($\Sigma(CT_{calc}/CT_{99.9})$).	141.709(d)(1)(ii)	Adopted by Reference	
Systems using more than one point of disinfectant application before the first customer must determine the CT value of each disinfection segment immediately prior to the next point of disinfectant application, or for the final segment, before or at the first customer, during peak hourly flow. The ($CT_{calc}/CT_{99.9}$) value of each segment and ($\Sigma(CT_{calc}/CT_{99.9})$) must be calculated using the method in paragraph (d)(1)(ii) of this section.	141.709(d)(2)	Adopted by Reference	
The system must determine the total logs of inactivation by multiplying the value calculated in paragraph (d)(1) or (d)(2) of this section by 3.0.	141.709(d)(3)	Adopted by Reference	
Systems must calculate the log of inactivation for viruses using a protocol approved by the state.	141.709(d)(4)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Systems must use the procedures specified in paragraphs (e)(1) and (2) of this section to calculate a disinfection benchmark.	141.709(e)	Adopted by Reference	
For each year of profiling data collected and calculated under paragraphs (a) through (d) of this section, systems must determine the lowest mean monthly level of both <i>Giardia lamblia</i> and virus inactivation. Systems must determine the mean <i>Giardia lamblia</i> and virus inactivation for each calendar month for each year of profiling data by dividing the sum of daily or weekly <i>Giardia lamblia</i> and virus log inactivation by the number of values calculated for that month.	141.709(e)(1)	Adopted by Reference	
The disinfection benchmark is the lowest monthly mean value (for systems with one year of profiling data) or the mean of the lowest monthly mean values (for systems with more than one year of profiling data) of <i>Giardia lamblia</i> and virus log inactivation in each year of profiling data.	141.709(e)(2)	Adopted by Reference	
141.710 BIN CLASSIFICATION FOR FILTERED SYSTEMS			
Following completion of the initial round of source water monitoring required under § 141.701(a), filtered systems must calculate an initial <i>Cryptosporidium</i> bin concentration for each plant for which monitoring was required. Calculation of the bin concentration must use the <i>Cryptosporidium</i> results reported under § 141.701(a) and must follow the procedures in paragraphs (b)(1) through (5) of this section.	141.710(a)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
For systems that collect a total of at least 48 samples, the bin concentration is equal to the arithmetic mean of all sample concentrations	141.710(b)(1)	Adopted by Reference	
For systems that collect a total of at least 24 samples, but not more than 47 samples, the bin concentration is equal to the highest arithmetic mean of all sample concentrations in any 12 consecutive months during which <i>Cryptosporidium</i> samples were collected.	141.710(b)(2)	Adopted by Reference	
For systems that serve fewer than 10,000 people and monitor for <i>Cryptosporidium</i> for only one year (i.e., collect 24 samples in 12 months), the bin concentration is equal to the arithmetic mean of all sample concentrations.	141.710(b)(3)	Adopted by Reference	
For systems with plants operating only part of the year that monitor fewer than 12 months per year under § 141.701(e), the bin concentration is equal to the highest arithmetic mean of all sample concentrations during any year of <i>Cryptosporidium</i> monitoring.	141.710(b)(4)	Adopted by Reference	
If the monthly <i>Cryptosporidium</i> sampling frequency varies, systems must first calculate a monthly average for each month of monitoring. Systems must then use these monthly average concentrations, rather than individual sample concentrations, in the applicable calculation for bin classification in paragraphs (b)(1) through (4) of this section.	141.710(b)(5)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Filtered systems must determine their initial bin classification from the table in this section and using the <i>Cryptosporidium</i> bin concentration calculated under paragraphs (a)-(b) of this section.	141.710(c)	Adopted by Reference	
Following completion of the second round of source water monitoring required under § 141.701(b), filtered systems must recalculate their <i>Cryptosporidium</i> bin concentration using the <i>Cryptosporidium</i> results reported under § 141.701(b) and following the procedures in paragraphs (b)(1) through (4) of this section. Systems must then redetermine their bin classification using this bin concentration and the table in paragraph (c) of this section.	141.710(d)	Adopted by Reference	
Filtered systems must report their initial bin classification under paragraph (c) of this section to the state for approval no later than 6 months after the system is required to complete initial source water monitoring based on the schedule in § 141.701(c).	141.710(e)(1)	Adopted by Reference	
Systems must report their bin classification under paragraph (d) of this section to the state for approval no later than 6 months after the system is required to complete the second round of source water monitoring based on the schedule in § 141.701(c).	141.710(e)(2)	Adopted by Reference	
The bin classification report to the state must include a summary of source water monitoring data and the calculation procedure used to determine bin classification.	141.710(e)(3)	Adopted by Reference	

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Failure to comply with the conditions of paragraph (e) of this section is a violation of the treatment technique requirement.	141.710(f)	Adopted by Reference	
141.711 FILTERED SYSTEM ADDITIONAL <i>CRYPTOSPORIDIUM</i> TREATMENT REQUIREMENTS			
Filtered systems must provide the level of additional treatment for <i>Cryptosporidium</i> specified in this paragraph based on their bin classification as determined under § 141.710 and according to the schedule in § 141.713.	141.711(a)	Adopted by Reference	
Filtered systems must use one or more of the treatment and management options listed in § 141.715, termed the microbial toolbox, to comply with the additional <i>Cryptosporidium</i> treatment required in paragraph (a) of this section.	141.711(b)(1)	Adopted by Reference	
Systems classified in Bin 3 and Bin 4 must achieve at least 1-log of the additional <i>Cryptosporidium</i> treatment required under paragraph (a) of this section using either one or a combination of the following: bag filters, bank filtration, cartridge filters, chlorine dioxide, membranes, ozone, or UV, as described in §§ 141.716 through 141.720.	141.711(b)(2)	Adopted by Reference	
Failure by a system in any month to achieve treatment credit by meeting criteria in §§ 141.716 through 141.720 for microbial toolbox options that is at least equal to the level of treatment required in paragraph (a) of this section is a violation of the treatment technique requirement.	141.711(c)	Adopted by Reference	